

WHAT IS CLAIMED IS:

- [c1] An inflator comprising:
a bottle configured to be charged with a high-pressure gas;
a sealing plate positioned to seal the bottle at an orifice; and
a receiving member including a perforation structure for breaking the sealing plate,
wherein one of the receiving member and the bottle includes a projection extending partially around the periphery of the receiving member or the bottle and wherein the projection mates with a groove in the other of the receiving member or bottle when the bottle and receiving member are coupled together thereby preventing the receiving member and the bottle from moving apart.
- [c2] The inflator of claim 1, wherein the other of the receiving member or the bottle includes a guide groove for receiving the projection of the receiving member or bottle when the receiving member and bottle are being coupled together.
- [c3] The inflator of claim 1, wherein the bottle extends into the receiving member.
- [c4] The inflator of claim 1, wherein each of the receiving member and the bottle include a key groove.
- [c5] The inflator of claim 2, wherein when the receiving member and the bottle are coupled together, the key grooves are aligned and a key is positioned in the key groove to prevent relative rotation of the bottle and the receiving member.
- [c6] An inflator comprising:
a bottle configured to be charged with a high-pressure gas;
a sealing plate positioned to seal the bottle at an orifice; and
a receiving member including a perforation structure for breaking the sealing plate,
wherein the bottle includes
projections formed on the peripheral surface of one end of the bottle extending in the peripheral direction, and
key groove formed in the peripheral surface of the end of the bottle, extending in the axial direction;

wherein one end of the receiving member includes
a guide groove extending in the axial direction of the receiving member located
on an inner surface at one end of the receiving member, the guide groove
configured to guide the projection of the bottle when the receiving member is
being coupled with the end of the bottle,
grooves extending in the peripheral direction, for mating with the projections
after relative rotation of the receiving member and the bottle, and
key groove positioned to align with the key groove on the bottle after relative
rotation of the receiving member and the bottle rotate;
a key configured to be inserted into the key grooves for preventing relative
rotation of the bottle and the receiving member; and
wherein the end of the bottle is coupled with the end of the receiving member,
and
wherein the bottle and the receiving member are connected to each other by the
rotation of the bottle or the receiving member.

- [c7] The inflator of claim 6, wherein the length of the key groove formed in the
peripheral surface of the bottle is at least twice the length of the key.
- [c8] The inflator of claim 7, wherein the length of the key groove formed in the inner
surface of the receiving member is substantially greater than or equal to the
length of the key.
- [c9] The inflator of claim 8, wherein the inflator is configured so that the key is
completely inserted into the key groove formed in the inner surface of the
receiving member after the bottle and the receiving member are assembled with
each other.
- [c10] An inflator comprising:
a bottle having an axial direction and configured to be charged with a high-
pressure gas;
a sealing plate positioned to seal the bottle at an orifice; and
a receiving member having an axial direction including a perforation structure
for breaking the sealing plate,
wherein the bottle and receiving member are coupled together so that the axial

directions are aligned and wherein the bottle and receiving member are prevented from moving apart in an axial direction by an engaged projection and groove.

[c11] The inflator of claim 10, wherein relative rotation of the bottle and the receiving member is prevented by a key positioned in a key groove.

[c12] The inflator of claim 10, wherein the projection is located on an outside of the bottle.

[c13] The inflator of claim 12, wherein the projection extends in a direction generally perpendicular to the axial direction of the bottle.

[c14] The inflator of claim 13, wherein an end of the bottle having the projection fits into an open end of the receiving member.

[c15] The inflator of claim 14, wherein the receiving member includes a guide groove configured to allow the bottle and the projection to move axially within the receiving member without engaging the groove.

[c16] The inflator of claim 15, wherein the receiving member and bottle are configured to be rotated relative to each other to allow the projection to engage the first mentioned groove.

[c17] An inflator comprising:
a bottle having an axial direction and configured to be charged with a high-pressure gas;
a sealing plate positioned to seal the bottle at an orifice; and
a receiving member having an axial direction including a perforation structure for breaking the sealing plate,
wherein the bottle and receiving member are coupled together and prevented from rotating relative to one another by a key positioned in a key groove.

[c18] The inflator of claim 17, wherein a portion of the key groove is located on the receiving member.

[c19] The inflator of claim 17, wherein an end of the bottle extends into an end of the

receiving member.

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